REMARKS/ARGUMENTS

Favorable reconsideration of this application as Previously Presented and in view of the following remarks is respectfully requested.

Claims 1-14 are pending, Claims 1, 3, 7, 8, 10 and 14 have been amended. The changes and additions to the claims do not add new matter and are supported by the originally filed specification, for example, on page 24, lines 5-7, page 25, lines 5-26; page 32, lines 5-26;

In the outstanding Office Action, Claims 1-4, 6-11, and 13-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zakhor et al. (U.S. Patent No. 5,699,121, hereafter "Zakhor") in view of Saukkonen (U.S. Patent No. 6,141,053); and Claims 5 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zakhor in view of Saukkonen and Abe (U.S. Patent No. 5,805,737).

Applicants thank the examiner for the courtesy of an interview with Applicants' representative, Mr. Sameer Gokhale, on July 26, 2010. During the interview, the differences between the claims and the applied art were discussed. Further, clarifying claim amendments were also discussed. Arguments and claims similar to those presented during the interview are presented herewith for formal consideration.

Applicants further thank the examiner for the courtesy of a telephone interview with Applicants' representative on August 20, 2010. The examiner indicated that he and his supervisor determined that dependent Claim 2 contains allowable subject matter in combination with the features of the proposed amendments to Claim 1 discussed during the interview of July 26, 2010.

With respect to the rejection of Claim 1 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection in part and submit that the clarifying amendment to Claim 1 overcomes this ground of rejection. Amended Claim 1 recites, *inter alia*,

> conversion means for converting coding target blocks within a coding target image into conversion information, the conversion information being atom information of the coding target image;
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> quantization means for quantizing the conversion information and generating quantized conversion information; and
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> encoding means for generating compression data by encoding the quantized conversion information based on a plurality of sizes of blocks, and for generating a compression code used to generate the compression data for each block size, wherein
>
> the encoding means adopts a compression code having a minimum bit rate among the plurality of generated compression codes over all of the plurality of block sizes, determines the block size which corresponds to the compression code having the minimum bit rate, and includes the block size and compression code corresponding to the minimum bit rate in a header information.

Zakhor is directed to a method for compression of low bit rate video signals. Fig. 1 of Zakhor shows a compression apparatus 20 which includes a pattern matcher 60 and an atom coder 100. The Office Action takes the position that the pattern matcher 60 corresponds to the claimed "conversion means" and the atom coder 100 corresponds to the both the "quantization means" and the "encoding means" (see Office Action, at page 3). The Office Action also asserts that Zakhor discloses "the encoding means adopts the block size and compression code having a minimum bit rate among the plurality of generated compression codes, and includes the block size and compression code corresponding to the lowest bit rate." (See Office Action, at page 3, citing col. 4, lines 50-58 and col. 5, lines 1-28 of Zakhor. The Office Action further states on page 3 that "Zakhor discloses how using the pattern matcher is advantageous for low bit rates and that the closest pattern is found which corresponds to the lowest bit rate."

However, providing ***the advantage*** of low bit rates, as is mentioned in Zakhor (see col. 5, lines 7-8) is not the same as adopting a block size and compression code having a minimum bit rate among a plurality of compression codes that are generated for a plurality of block sizes.

Furthermore, amended Claim 1 explicitly clarifies that "the encoding means adopts a compression code having a minimum bit rate ***among the plurality of generated compression codes over all of the plurality of block sizes***, determines the block size which corresponds to the compression code having the minimum bit rate, and includes the block size and compression code corresponding to the minimum bit rate in a header information." In other words, in Claim 1, there are a plurality of block sizes (such as 4x4, 8x8, and 16x16, in a non-limiting example), compression data is generated for each of these block sizes, and then amongst all of the block sizes, the compression code having the minimum bit rate is adopted (for example, the block size 8x8 is determined to have the compression code with the minimum bit rate over block sizes 4x4 and 16x16), and then this adopted compression code and block size are included in header information.

Applicant submits that Zakhor clearly does not disclose or suggest the above-noted features of amended Claim 1.

The Office Action relies on Saukkonen as disclosing that the block size and compression code corresponding to the lowest bit rate is included in header information. Saukkonen is directed to a method of optimizing bandwidth for transmitting compressed video data streams. Saukkonen describes using headers that indicate physical block size and compression ratio (see col. 4, lines 22-23). Specifically, Saukkonen describes the following on col. 4, lines 41-60:

> FIG. 2 illustrates an important aspect of the present invention used to determine a minimum bandwidth requirement based on the size of the receiver buffer available. Specifically, the compressed video data stream

> 42 is scanned by the server according to this invention to determine the lowest compression rate in the file, and determine, from this compression rate, a uniform transmission rate that ensures continuous delivery and display of the compressed video data stream. More specifically, the server scans the headers in the compressed video data stream 42, each block representing one or a multiple of frames of video in the sequence they are stored and displayed. The scanning is performed through a window 44, which is the same size as the receiver 14-16 buffer, **to determine how many of the variable length blocks would sequentially fit in the buffer**. By determining the smallest number of consecutive blocks of data that can fit in this window, the server can identify the least compressed area of transmission and request adequate bandwidth from the network 12 to handle this amount of data. [Emphasis added]

Therefore, Saukkonen clearly describes that the compressed video data stream may contain different sizes of blocks and different compression rates, which is why the server is scanning the headers to determine how many of the ***variable length blocks*** would sequentially fit in the buffer. Applicants note that Saukkonen is directed to requesting the proper amount of bandwidth based on the size of the data to be sent so that the receiver buffers do not fill up. Thus, Saukkonen is not directed to making sure an efficient compression code and block size is determined before generating the headers. On the contrary, Saukkonen merely adjusts the amount of bandwidth needed based on the size of the compressed video data.

Thus, where Saukkonen describes that its disclosed method ensures that the lowest possible transmission bit rate is requested (see col. 7, lines 33-35), this has to do with requesting bandwidth over a network ***and has nothing to do with determining a compression code and block size which provide the minimum bit rate to be used in the transmitted data.***

In other words, before determining what will be included in header information, Saukkonen never discloses that compression data is generated for each of a plurality of block sizes, and then amongst all of the block sizes, the compression code having the minimum bit

rate is adopted, and then this adopted compression code and block size are included in header information.

Therefore, Applicant submit that the combination of Zakhor and Saukkonen clearly fails to disclose or suggest all of "encoding means for generating compression data by encoding the quantized conversion information based on a plurality of sizes of blocks, and for generating a compression code used to generate the compression data for each block size, wherein the encoding means adopts a compression code having a minimum bit rate among the plurality of generated compression codes over all of the plurality of block sizes, determines the block size which corresponds to the compression code having the minimum bit rate, and includes the block size and compression code corresponding to the minimum bit rate in a header information," as defined in amended Claim 1.

Abe has been considered but fails to remedy the deficiencies of Zakhor and Saukkonen with regard to amended Claim 1. Therefore, Applicants respectfully submit that amended Claim 1 (and all associated dependent claims) patentably distinguishes over Zakhor, Saukkonen, and Abe, either alone or in proper combination.

Amended independent Claims 3, 7, 8, 10 and 14 recite features similar to those of amended Claim 1 discussed above. Therefore, Applicants respectfully submit that amended Claims 3, 7, 8, 10, and 14 (and all associated dependent claims) patentably distinguish over Zakhor, Saukkonen, and Abe, either alone or in proper combination.

Furthermore, with regard to the rejection of dependent Claims 2 and 4 under 35 U.S.C. §103(a), Applicants traverse this ground of rejection. Claim 2 (and similarly Claim 4) recites, *inter alia*,

> for each block size, the encoding means executes processing in which the encoding means divides the coding target image into the plurality of blocks, extracts, for each of the plurality of blocks, the quantized conversion information the positional information of which is included in the block, encodes, for each of the plurality of blocks, a

> flag for specifying existence of the quantized conversion information the positional information of which is included in the block, encodes, for each of the plurality of blocks, the number of items of quantized conversion information each of which includes the positional information included in the block, converts the positional information of the quantized conversion information into inter-block positional information specifying a relative position in the block in which the positional information is included, and encodes the quantized conversion information.

The Office Action takes the position that Zakhor discloses the above-noted features of Claim 2. However, on col. 5, lines 14-28 (which was cited by the examiner), Zakhor describes an "atom" in general. Additionally, on col. 6, lines 26-37 (which was cited by the examiner), Zakhor describes the features of an atom coder 100, which transforms the coefficients of the atom parameter signal into bits.

Additionally, the examiner indicates that an atom in Zakhor is being interpreted as the claimed "flag." However, amended independent Claim 1 now clarifies that the "the conversion information being atom information of the coding target image." Thus, where Claim 2 recites "a flag for specifying existence of the quantized conversion information the positional information of which is included in the block," it is clear that the recited "flag" is not an "atom" itself since the flag is clearly defined as specifying ***the existence*** of "quantized conversion information" (i.e., quantized atom information) in the block.

Furthermore, the Office Action has merely cited to the above-noted portions of Zakhor (col. 5, lines 14-28 and col. 6, lines 26-37) but has still failed to show how Zakhor actually discloses or suggests **all of** "for each block size, the encoding means executes processing in which the encoding means divides the coding target image into the plurality of blocks, extracts, for each of the plurality of blocks, the quantized conversion information the positional information of which is included in the block, encodes, for each of the plurality of blocks, a flag for specifying existence of the quantized conversion information the positional information of which is included in the block, encodes, for each of the plurality of blocks, the

number of items of quantized conversion information each of which includes the positional information included in the block, converts the positional information of the quantized conversion information into inter-block positional information specifying a relative position in the block in which the positional information is included, and encodes the quantized conversion information," as required by Claim 2.

Therefore, Applicants submit that the Zakhor fails to disclose or suggest all of the features of dependent Claims 2 or 4.

Furthermore, as noted above, the examiner indicated in the telephone discussion of August 20, 2010 that Claim 2 contains allowable subject matter when recited in combination with the amendments to Claim 1.

Thus, Applicants submit that dependent Claims 2 and 4 (and all associated dependent claims) patentably distinguish over Zakhor, Saukkonen, and Abe, either alone or in proper combination.

Consequently, in light of the above discussion and in view of the present amendment, the outstanding grounds for rejection are believed to have been overcome. The present application is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested. Furthermore, the examiner is kindly invited to contact the Applicants' undersigned representative at the phone number below to resolve any outstanding issues.

Respectfully submitted,

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